

IN THE CLAIMS:

1. (original) A magnetic head comprising,
 - an upper shield layer;
 - a lower shield layer on which a lead contact portion is provided on the edge of the lower shield layer in a stripe height direction within a same plane, the lead contact portion having a width either being equal to or shorter than a maximum length of the lower shield layer in a track width direction;
 - a magnetoresistive sensor which is formed between the upper shield layer and the lower shield layer;
 - a first lead line which is electrically connected to the lead contact portion of the lower shield layer; and
 - a second lead line which is electrically connected to the upper shield layer, wherein,
 - when the upper shield layer is projected on a plane where the lower shield layer exists, the lead contact portion of the lower shield layer is provided in a position not overlapped by the upper shield layer, and sense current flows through the upper shield layer, the magnetoresistive sensor and the lower shield layer.
2. (original) A magnetic head comprising:
 - an upper shield layer;
 - a lower shield layer on which a lead contact portion is provided on the edge of the lower shield layer in a track width direction within a same plane, the lead contact portion having a height either being equal to or shorter than a maximum height of the lower shield layer in a stripe height direction;
 - a magnetoresistive sensor which is formed between the upper shield layer and the lower shield layer;
 - a first lead line which is electrically connected to the lead contact portion of the lower shield layer; and
 - a second lead line which is electrically connected to the upper shield layer, wherein,

when the upper shield layer is projected on a plane where the lower shield layer exists, the lead contact portion of the lower shield layer is provided in a position not overlapped by the upper shield layer, and sense current flows through the upper shield layer, the magnetoresistive sensor and the lower shield layer.

3. (original) A magnetic head comprising:

an upper shield layer;

a lower shield layer;

a magnetoresistive sensor formed between the upper shield layer and the lower shield layer;

a first lead line electrically connected to the lower shield layer;

a second lead line electrically connected to the upper shield layer, and a sense current flows through the upper shield layer, the magnetoresistive sensor and the lower shield layer, wherein,

the lower shield layer has a lower lead contact portion within a same plane, the lower lead contact portion is positioned so as not to be overlapped by the upper shield layer, when the upper shield layer is projected on the plane where the lower shield layer exists, and the first lead line is connected to the lower lead contact portion.

4. (original) A magnetic head according to claim 3, wherein,

the lower lead contact portion is formed in approximately convex shape on an opposite side of an air bearing surface in the stripe height direction on the lower shield layer.

5. (original) A magnetic head according to claim 4, wherein,

the upper shield layer has an upper lead contact portion of approximately convex shape within a same plane.

6. (original) A magnetic head according to claim 5, wherein,

the upper lead contact portion is formed on an opposite side of the air bearing surface in the stripe height direction on the upper shield layer.

7. (original) A magnetic head according to claim 5, wherein,
the upper lead contact portion is formed on at least one edge in the track width direction on the upper shield layer.
8. (original) A magnetic head according to claim 3, wherein,
the lower lead contact portion is formed in approximately convex shape on at least one edge in the track width direction on the lower shield layer.
9. (original) A magnetic head according to claim 8, wherein,
the upper shield layer has an upper lead contact portion of approximately convex shape within a same plane.
10. (original) A magnetic head according to claim 9, wherein,
the upper lead contact portion is formed on an opposite side of an air bearing surface in the stripe height direction on the upper shield layer.
11. (original) A magnetic head according to claim 9, wherein,
the upper lead contact portion is formed on at least one edge in the track width direction on the upper shield layer.
12. (original) A magnetic head according to claim 3, further comprising
a write head having a main pole and a return pole.
13. (currently amended) A magnetic disk drive comprising:
a magnetic disk;
a read/write head having a recording head for recording information on the magnetic disk and a reading head for detecting the information recorded on the magnetic disk;
a read/write circuit for sending and receiving a recording signal and a reproducing signal from/to the read/write head;

an actuator means which moves the read/write head to a predetermined position on the magnetic disk; and

a read/write operation control means for controlling the read/write circuit and the actuator means. ~~wherein,~~

~~the magnetic head according to claims 1 to 11 is used as the read/write head~~

14. (new) A magnetic disk drive according to claim 13, wherein the read/write head includes a magnetic head comprising:

an upper shield layer;

a lower shield layer on which a lead contact portion is provided on the edge of the lower shield layer in a stripe height direction within a same plane, the lead contact portion having a width either being equal to or shorter than a maximum length of the lower shield layer in a track width direction;

a magnetoresistive sensor which is formed between the upper shield layer and the lower shield layer;

a first lead line which is electrically connected to the lead contact portion of the lower shield layer; and

a second lead line which is electrically connected to the upper shield layer, wherein,

when the upper shield layer is projected on a plane where the lower shield layer exists, the lead contact portion of the lower shield layer is provided in a position not overlapped by the upper shield layer, and sense current flows through the upper shield layer, the magnetoresistive sensor and the lower shield layer.

15. (new) A magnetic disk drive according to claim 13, wherein the read/write head includes a magnetic head comprising:

an upper shield layer;

a lower shield layer on which a lead contact portion is provided on the edge of the lower shield layer in a track width direction within a same plane, the lead contact portion having a height either being equal to or shorter than a maximum height of the lower shield layer in a stripe height direction;

a magnetoresistive sensor which is formed between the upper shield layer and the lower shield layer;

a first lead line which is electrically connected to the lead contact portion of the lower shield layer; and

a second lead line which is electrically connected to the upper shield layer, wherein,

when the upper shield layer is projected on a plane where the lower shield layer exists, the lead contact portion of the lower shield layer is provided in a position not overlapped by the upper shield layer, and sense current flows through the upper shield layer, the magnetoresistive sensor and the lower shield layer.

16. (new) A magnetic disk drive according to claim 13, wherein the read/write head includes a magnetic head comprising:

an upper shield layer;

a lower shield layer;

a magnetoresistive sensor formed between the upper shield layer and the lower shield layer;

a first lead line electrically connected to the lower shield layer;

a second lead line electrically connected to the upper shield layer, and a sense current flows through the upper shield layer, the magnetoresistive sensor and the lower shield layer, wherein,

the lower shield layer has a lower lead contact portion within a same plane, the lower lead contact portion is positioned so as not to be overlapped by the upper shield layer, when the upper shield layer is projected on the plane where the lower shield layer exists, and the first lead line is connected to the lower lead contact portion.

17. (new) A magnetic disk drive according to claim 16, wherein,

the lower lead contact portion is formed in approximately convex shape on an opposite side of an air bearing surface in the stripe height direction on the lower shield layer.

18. (new) A magnetic disk drive according to claim 17, wherein,
the upper shield layer has an upper lead contact portion of approximately convex shape within a same plane.
19. (new) A magnetic disk drive according to claim 18, wherein,
the upper lead contact portion is formed on an opposite side of the air bearing surface in the stripe height direction on the upper shield layer.
20. (new) A magnetic disk drive according to claim 18, wherein,
the upper lead contact portion is formed on at least one edge in the track width direction on the upper shield layer.
21. (new) A magnetic disk drive according to claim 16, wherein,
the lower lead contact portion is formed in approximately convex shape on at least one edge in the track width direction on the lower shield layer.
22. (new) A magnetic disk drive according to claim 21, wherein,
the upper shield layer has an upper lead contact portion of approximately convex shape within a same plane.
23. (new) A magnetic disk drive according to claim 22, wherein,
the upper lead contact portion is formed on an opposite side of an air bearing surface in the stripe height direction on the upper shield layer.
24. (new) A magnetic disk drive according to claim 22, wherein,
the upper lead contact portion is formed on at least one edge in the track width direction on the upper shield layer.